

IX.—*Descriptions and Records of Bees.*—LXXXVIII.

By T. D. A. COCKERELL, University of Colorado.

Eucera notata, Lepeletier.

Tangier, Marocco. From Queensland Museum.

Eucera nigrilabris, Lep. (*terminalis*, Sm.).

Ras-el-Ma, Algeria. (Queensland Museum.)

The male cannot be recognised by Friese's key, as he places it in the group with the abdominal hair all grey, which is by no means true of *nigrilabris*. Also from Ras-el-Ma are *E. collaris*, Dours, and *E. eucnemidea*, Dours.

Centris obscuriventris, Friese.

"Guyane, Maroni." From Queensland Museum.

Anthophora urbana, Cresson.

Santa Fé, New Mexico, Aug. 3 (*Cockerell*).

Anthophora flavicollis, Gerst.

Dimbroko, French W. Africa. From Queensland Museum.

Anthophora atroalba, Lepeletier.

♂.—Length about 14 mm., anterior wing 9·3 mm.

Black, with abundant erect hair, not forming distinct bands on abdomen; malar space very short, but distinct; pale yellow marks as follows:—labrum (except basal spots), large triangular mark on clypeus (its sides concave, its upper end pointed), small lateral face-marks (ploughshare-shaped, with a linear extension along orbits to level of middle of supra-clypeal area), a narrow transverse supra-clypeal band, and broad band on front of scape; mandibles bidentate, entirely black; third antennal joint as long as the next three together; hair of head and thorax pale, yellowish grey on thorax above (the effect rather olivaceous), black hair in middle of mesothorax and on vertex, not conspicuous; face with long white hair, but black at sides; sides of thorax posteriorly with brown-black hair; tegulae black. Wings hyaline, apical margin faintly brownish. Legs black, with black and white hair; middle basitarsi with a very broad

dense circular fringe of hair, mainly black, but white apically, the hairs longest on posterior side; apical joint of middle tarsi simple, except for a thin outstanding tuft of hair on one side; hind femora and tibiae with brown-black hair, but the basitarsi with a very conspicuous tuft of pure white hair at end, and the three middle tarsal joints with white hair; hind basitarsi not toothed; first two segments of abdomen with long hair like that on thorax above; the others with long erect black hair, but some white hair laterally.

The specimen described is from Tunis (Le Moul, Queensland Museum).

A male from Bône, Algeria, differs conspicuously in that the apical yellow band of clypeus is very broad, reaching the lateral face-marks, and forming a right-angle with the vertical clypeal mark. One from Tangier, Morocco, is more like the Tunis example. It would be difficult to recognise this insect from the brief account of the male in Friese's 'Apidæ Europeæ,' and in his table it seems to run nearest to *A. balearica*, Friese. I therefore give a new description. Lepeletier gave the localities as Oran and the Canary Is. Oran must be considered the type-locality; the Canary Is. material was doubtless *A. alluandi*, Pérez.

Anthophora nigrocincta, Lepeletier.

Anthophora robusta, Klug.

Both from Ras-el-Ma, Algeria. (Queensland Museum.)

A *Tetralonia ruficollis*, Brullé, comes from the same locality, and a *T. lucasi*, Gribodo, from Tunis.

Anthophora disrupta, sp. n.

♀.—Length about 17 mm.

Like *A. atrocincta*, Lep., except that the appressed rufous pile of the abdomen covers all of the second segment except the extreme base, the pale markings of the head are yellower, the vertical band on clypeus is narrow (not wedge-shaped), and the clypeus is not so high. It may deserve to rank only as a subspecies.

Olokemeji, Ibadan, Nigeria (from Le Moul). Received from Queensland Museum.

Crocisa interrupta, Vachal, comes from the same locality. Also from this locality are four species of *Trigona*, separable thus:—

Extremely minute, length hardly over 2 mm.;

face without yellow or white markings . . . *T. gribodoi*, Magr.

Considerably larger 1.

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| 1. Face and front pruinose, but without light markings; base of antennæ red. | <i>T. tesorum</i> , Ckll. |
| Face with light markings. | 2. |
| 2. Larger; clypeus pale | <i>T. nebulata</i> , Smith. |
| Smaller; clypeus with a yellow hat-shaped mark. | <i>T. lendliana</i> , Friese. |

Trigona trochanterica, sp. n.

Worker.—Length 6 mm.

Robust, black, the abdomen dark reddish, more distinctly reddened at sides of second segment, fifth segment with a red patch on each side, and apex pale dull red, with scattered short black hairs; venter clear red. Legs black, with last tarsal joint on each red, and the trochanters for the most part bright ferruginous. Head very large and broad; mandibles black, with an obscure red mark in middle; malar space well developed; face with a greyish-olivaceous pruinosity; scape long, black except at extreme base; flagellum dark reddish, with the first joint black, and the very short second one pale reddish beneath; front entirely dull; vertex with stiff black hair; mesothorax dull, with short fulvous tomentum anteriorly and posteriorly, densest posteriorly; tubercles and the region behind them with fulvous tomentum; scutellum prominent, shining anteriorly, and with short black hair; tegulæ dull ferruginous. Wings yellowish, nervures and stigma ferruginous; hind tibiæ extremely broad, excavated on outer side.

Sandakan, Borneo (*Baker*).

Nearest to *T. erythrogaster*, Cam., but thorax with pale hair. It is superficially like *T. itama*, Ckll., but quite different by the dull front, &c. The red trochanters are peculiar; in *T. nitidiventris*, Sm., the coxæ are similarly coloured.

Trigona fuscibasis, sp. n.

Worker.—Length about 5 mm., anterior wing 6 mm.

Head, thorax, and legs black, with the clypeus (except upper margin), supraclypeal area, labrum, mandibles, and the long scape ferruginous; flagellum ferruginous, dusky above; mesothorax dark chestnut-red; anterior femora and basitarsi in front, small joints of their tarsi and of the others more or less, ferruginous; head broad; face and front with olivaceous pruinescence; head and thorax polished and shining; sides of thorax with brownish tomentum; scutellum with black hair; tegulæ clear ferruginous. Wings dark

fuliginous as far as level of the orange-ferruginous stigma, beyond that milky-white; hind tibiæ fringed with black hair. Abdomen shining dark reddish brown, the apical half blackened, venter pallid towards base.

Sandakan, Borneo (*Baker, 9964*).

Known from *T. apicalis*, Smith, by the black legs. The shiny head and thorax separate it from *T. collina*, Smith.

The distribution of *Trigona* in the Malay region is very extraordinary. From the Philippines we know only three species. Of these, two are from Palawan only. Borneo, on the other hand, has 25 species. More species are known from Penang than from the whole Philippine group. In Borneo, the species appear to be largely confined to limited areas; thus among the numerous species from Sandakan are none of the nine described from Borneo by Cameron. The deficiency of species in the Philippines cannot well be due to lack of material, as Messrs. Baker and McGregor have sent me large collections from those islands. That the Philippine bees are really fairly well known is shown by the fact that a fine collection from Panay, whence no bees had previously come, contained only two new things, a species of *Nomia* and a variety or race of *Megachile*.

Trigona rufibasalis, Cockerell, variety *a*.

Scape red only at base.

Sandakan, Borneo (*Baker*).

Trigona scintillans, sp. n.

Worker.—Length about 3 mm.; anterior wing 2·8 mm.

Head, thorax, and abdomen shining black, not hairy; the face with a little pale hair at sides, but not canescent; labrum and mandibles bright ferruginous; scape pale ferruginous in front, flagellum dark; tegulæ very dark reddish. Wings hyaline, stigma and nervures dilute sepia. Legs black, the small joints of tarsi ferruginous. Abdomen broad.

Sandakan, Borneo (*Baker*).

Differs from *T. erythrostroma*, Cam., by the smaller size and the stigma not black. Easily known from *T. atomella*, Ckll., by the narrower head and non-canescant face.

Melipona flavolineata, Friese.

“Guyane, Maroni.” From Queensland Museum.

Trigona cluripes (Fabr.) comes from the same locality.

Euryglossa halictina, sp. n.

♀.—Length about 8 mm.

Only moderately robust, the thorax appearing small in comparison with the abdomen; black, the head and thorax with thin pale hair, the hind margins of the first four abdominal segments narrowly dusky-testaceous; antennæ entirely black; clypeus shining, with sparse rather weak punctures; front and vertex dull; mesothorax dull, with extremely minute punctures; scutellum little more shining, with a depressed median line; tegulæ fuscous basally, with broad testaceous margins. Wings suffused with fuliginous, stigma and nervures fuscous. Legs black. Abdomen with little hair, moderately shining, impunctate.

Bridport, Tasmania, Oct. 26-30, 1913 (*F. M. Littler*, 2560).

Nearest to *E. fasciatella*, Ckll., but the head is not nearly so broad. It looks like a species of *Halictus*. The abdomen is longer and narrower than in *E. subsericea*, Ckll.

Lithurgus scabrosus (Smith).

Yule Island, S.E. Papua, 1915. (Queensland Museum.)

It is presumably this species which Friese has reported from New Guinea as *L. atratus*, Smith.

Dianthidium truncatiforme, Cockerell.

N. Djole, Gabon. (Queensland Museum.)

Megachile lachesis, Smith.

Kaimana, Dutch New Guinea (*H. Elgner*). From Queensland Museum.

Megachile saigonensis, sp. n.

♀.—Length about 14.5 mm.

Agrees with Bingham's description of *M. amputata*, Smith, except as follows:—apical abdominal segments finely punctured all over, not smooth at base; no fulvous fasciæ on abdomen beyond third segment; ventral scopa cream-coloured on first two segments and middle of third and fourth, but broadly black at sides of third and fourth, and black on last two segments; antennæ entirely black. The wings are yellowish smoky, with a small dark cloud beyond

end of marginal cell. Legs red, but hind tarsi black, the basitarsus very broad.

Saigon, Cochin China (from Le Moulton). Received from Queensland Museum.

This is probably a subspecies of Bingham's *M. amputata*, having the clypeus with a median smooth band, slightly depressed, and the mandibles with a subapical fossa. The original *M. amputata*, Smith, from Sarawak, though similar in appearance, was described as having the clypeus keeled, and is related to *M. harrisoni*, Ckll., from Sumatra, and *M. ferruginea*, Friese, from Siam. *M. fulvofasciata*, Rads., from Sikkim, which Bingham placed as a doubtful synonym of *amputata*, is only 10 mm. long, with whitish scopa.

Nomada penangensis, sp. n.

♀.—Length about 4 mm.

Ferruginous, with the front (except a broad red band on each side) and ocellar region black. Abdomen highly polished, without yellow spots, the first two segments broadly dusky apically, the third and fourth darkened all over, but the apex light red; face and pleura with thin pure white hair; mandibles simple; scape testaceous in front; flagellum dark; second antennal joint about half as long as third, third about as long as fourth; mesothorax densely punctured, clear red all over; tegulae ferruginous. Wings hyaline with dusky apex, nervures and stigma dark; b. n. going a little basad of t.-m.; second t.-c. lacking on right side of type, but the opposite wing has three submarginal cells. The antennae are quite long, reaching the metathorax.

Island of Penang (*Baker*, 9968).

Resembles some of the Philippine species, but separated by the small size, combined with dark front and entirely red mesothorax. It is especially close to *N. attrita*, Ckll., from Mindanao, and were not the localities so far apart it might be thought a mere variety.

Parasphecodes infrahirtus, sp. n.

♂ (type).—Length about 7.5 mm.

Entirely black, except that the apical half of clypeus (angularly produced in middle above) is cream-colour, the mandibles are fairly red at apex, and the tarsi are dusky ferruginous apically. Head broader than long; face and clypeus roughened, not polished; antennae long, the flagellum submoniliform; head and thorax with thin long

white hair, but vertex with fuscous hair; mesothorax elevated and gibbous in front, dull anteriorly, polished on disc, with strong scattered punctures; scutellum polished, very sparsely punctured in middle; area of metathorax semilunar, sharply defined, with numerous longitudinal rugæ. Wings slightly dusky, stigma piceous, nervures sepia; second submarginal cell variable in width; hind tibiæ and tarsi with shining white hair on inner side. Abdomen rather short, polished, with the punctures excessively minute, and no hair-bands or patches on dorsal surface; on the ventral side there is a broad band of white tomentum across the middle of the abdomen.

♀.—Length fully 8 mm.

More robust, the broad face wholly black; mesothorax strongly and closely punctured on disc, but scutellum with two large polished impunctate areas; middle and hind tibiæ and tarsi brownish.

Launceston, Tasmania, Sept. 19, 1916 (*F. M. Littler*), two males. The female was taken at Launceston, April 13, 1916.

Much smaller than *P. dissimulator*, Ckll., which it resembles in many respects. The male has a very strong superficial resemblance to *Halictus spenceri*, Ckll.

X.—*A new Shrew and Two new Foxes from Asia Minor and Palestine.* By OLDFIELD THOMAS.

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IN working out some mammals obtained by Major Maurice Portal during the Palestine campaign, and presented by him to the National Museum, I have found the three following forms to need special names:—

Crocidura portali, sp. n.

Most nearly allied to the Central Asiatic species *C. ilensis*; widely different from the European forms of the genus.

Size small, though not excessively so. General colour clear pale grey, rather paler than "drab-grey" if the darker tips to the hairs are included, but it may be better described as "pale drab-grey" overlaid with the fine brown hair-tips which slightly darken it. Under surface creamy white, the